TV-890/970 /980 B/C/D/N

USER'S GUIDE
GUÍA DEL USUARIO
MODE D'EMPLOI

TV-890/980
Model B only
Solamente el modelo B
Modèle B seulement

LCD Color Television
Televisor color con pantalla de cristal líquido
Televiseur couleur à écran LCD

CASIO

MA0104-A Printed in Malaysia
Imprimé en Malaisie

Model B only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications to the product not expressly approved by CASIO could void the users authority to operate the product.

English

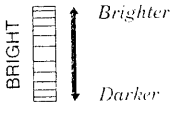
Thank you for purchasing this CASIO Color LCD Television. Be sure you carefully read this manual and follow its instructions whenever using the TV.

PRECAUTIONS

- Never attempt your own maintenance.
- Avoid water and dust.
- Do not use thinners or other chemical cleaners.
- Only use specified adapters and power sources. Never use adapters other than genuine CASIO adapters. Other adapters may cause serious damage.
- Do not expose the TV to temperature extremes or direct sunlight.
- Turn the TV off when not using it, and unplug the adapter.
- Avoid dropping the TV or otherwise subjecting it to strong impact.
- When you do not use your TV for extended periods, be sure to remove the batteries. Old batteries can leak causing damage and malfunction of the TV.

WATCHING THE TELEVISION

1. Extend the rod antenna.
2. Use the function selector to select either VHF (except model D) or UHF.
3. Press either of tuning keys ⟵⟶, and the tuning indicator will move to the next receivable channel. Repeat this operation until the desired channel is tuned in.
4. Use the volume dial to set the sound to a suitable level.
5. Use the brightness dial to adjust the brightness of the picture. The brightness of the screen changes with the viewing angle.



NOTE

Under poor reception conditions, the tuning indicator may continue to move without stopping because the auto tuner cannot detect weak broadcasts. In this case, use a commercially available external antenna (model B only) or relocate the TV to a place where reception is better.

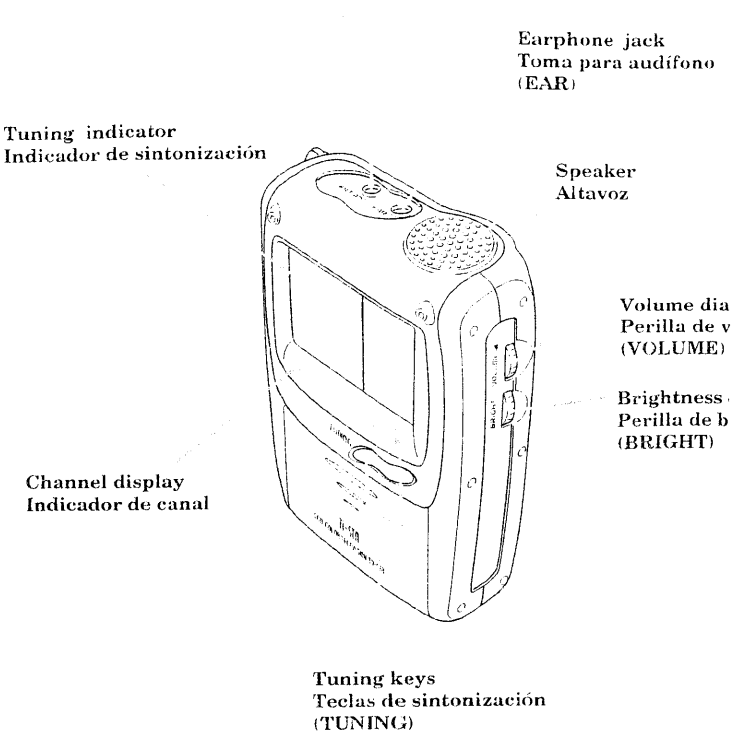
Locations where TV reception is bad

- Far away from broadcasting stations, among ferro-concrete structures or near mountains.
- Underground, in tunnels or in ferro-concrete buildings.
- Near high-tension wires, neon signs, or radio stations whose frequencies interfere.
- Near railroads, highways or airports.
- In trains or cars.

Backlight

In low temperatures, it will take some time for the fluorescent material to illuminate, or the light will take on a reddish tinge. This does not indicate malfunction of the backlight. Normal operation will resume after a short while.

GENERAL GUIDE
GUIA GENERAL



IMPORTANT!

Incorrectly using batteries can cause them to burst or leak, possibly damaging the interior of the TV. Note the following precautions:

- Be sure that the positive (+) and negative (–) poles of each battery are facing in the proper direction.
- Never mix batteries of different types.
- Never mix old batteries and new ones.
- Never leave dead batteries in the battery compartment.
- Remove the batteries if you do not plan to use the TV for long periods.
- Replace the batteries at least once every 2 years, no matter how much the TV is used during that period.
- Never try to recharge the batteries.
- Do not expose batteries to direct heat, let them become shorted, or try to take them apart.
- Should a battery leak, clean out the battery compartment of the TV immediately, taking care to avoid letting the battery fluid come into direct contact with your skin.

BATTERY LIFE

The first indication of weakening batteries will be a reduction in volume followed by unstable picture quality and sound. At this time, replace batteries with a full set of new ones and never mix battery types.

Battery Type	Battery Life
LR6	Approx. 4.5 hours Approx. 4.0 hours (Model B only)

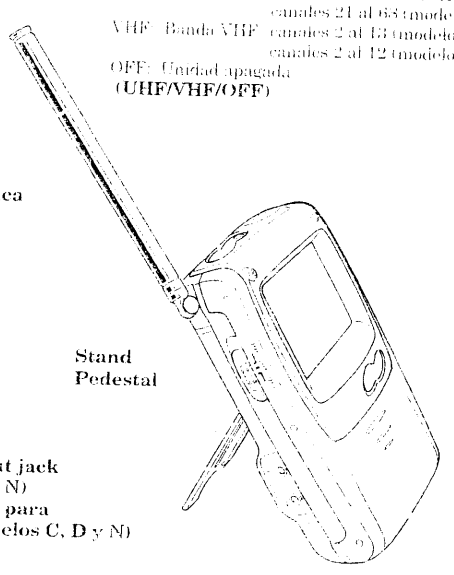
- Only use alkaline batteries. Battery life will be shortened significantly if manganese batteries are used.
- Low battery power generates heat. Heat does not mean malfunction.
- Effective battery life may differ depending on brand.

VIDEO CONNECTIONS

The optional RF cord (model B only) or AUDIO/VIDEO cord (models C, D and N) lets you use the TV as a video cassette recorder monitor, etc. **See Figure 5 and 6 in General Guide at the top of this page.**

Function selector
UHF: UHF band CH14-CH69 (model B)
CH21-CH69 (models C and N)
CH21-CH68 (model D)
VHF: VHF band CH2-CH13 (model B)
CH2-CH12 (models C and N)
OFF: Power turned OFF

Selector de funciones
UHF: Banda UHF canales 14 al 69 (modelo B)
canales 21 al 69 (modelos C y N)
canales 21 al 68 (modelo D)
VHF: Banda VHF canales 2 al 13 (modelo B)
canales 2 al 12 (modelos C y N)
OFF: Unidad apagada
(UHF/VHF/OFF)



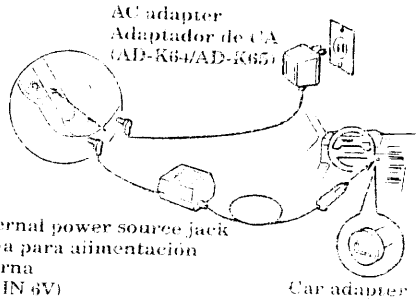
Rod antenna
Antena telescópica

Stand
Pedestal

Audio/Video input jack
(Models C, D and N)
Toma de entrada para audio/video (Modelos C, D y N)
(AUDIO/VIDEO)

External power source jack
Toma para alimentación externa
(DC IN 6V)

Battery compartment cover
Cubierta de compartimiento de pila



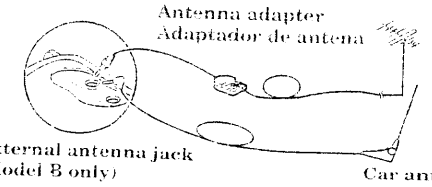
AC adapter
Adaptador de CA
(AD-K64/AD-K65)

Figure 1
Figura 1

External power source jack
Toma para alimentación externa
(DC IN 6V)

Figure 2
Figura 2

Car adapter
Adaptador para automóvil
(CA-K65)



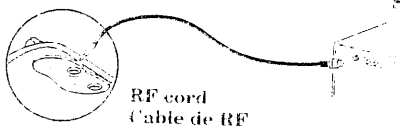
Antenna adapter
Adaptador de antena

Figure 3
Figura 3

External antenna jack
(Model B only)
Toma para antena externa (Salamente el modelo B) (EXT ANT)

Figure 4
Figura 4

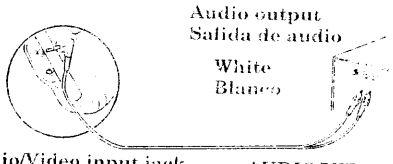
Car antenna
Antena de automóvil



RF output
Salida de RF

RF cord
Cable de RF

Figure 5
Figura 5



Audio output
Salida de audio

Video output
Salida de video

White
Blanco

Yellow
Amarillo

Figure 6
Figura 6

Audio/Video input jack
(Models C, D and N)
Toma de entrada para audio/video (Modelos C, D y N)
(AUDIO/VIDEO)

AUDIO/VIDEO cord
Cable de AUDIO/VIDEO

Recommended for areas with strong signal reception.
Recomendado para áreas con recepción de señal fuerte.

ver Supply: 3-way power supply system
Batteries: 4 AA-size dry batteries
AC: AC adapter AD-K64/AD-K65 (option)
Car battery: Car adapter CA-K65 (option)

ver Consumption: Approx. 3.1 W
Approx. 3.3 W (Model B only)

bient Temperature Range: 32°F to 0°C – 104°F (40°C)

nensions: 3 3/16 (W) × 1 7/16 (D) × 5 1/16 (H) inches
8.1 (W) × 3.7 (D) × 12.9 (H) cm

ght (excluding batteries): Approx. 6.7 oz 190 g

cifications and design are subject to change without notice.

OPTIONS

C adapter :	AD-K64/AD-K65	Car adapter :	CA-K65
ssette connector :	OS-76C	AUDIO/VIDEO cord :	AV-CT[*2]
ar antenna :	OS-62A[*1]	RF cord :	CP-12[*1]
ntenna adapter :	AS-158[*1]		

1 Model B only.
2 Models C, D and N

: Some of the options listed above may not be available in certain geographic areas.

Please keep all information for future reference.
Only models TV-970D and TV-970N conform with EC Directives 89/336/EEC, 92/31/EEC and 93/68/EEC.

CE Casio Electronics Co., Ltd.

NOTES

NOTA

Cuando las condiciones de recepcion son malas, es posible que el indicador de sintonizacion no se detenga en ningun canal; ello significa que el sintonizador automatico no puede sintonizar ningun canal porque las señales son muy debiles. En este caso, ubique su televisor en otro sitio, donde se logre una mejor recepcion.

Lugares donde la recepción no es buena

- Lejos de las emisoras de TV, entre estructuras de hierro o cerca de montañas.
- Sótanos, túneles y edificios con estructuras de hierro.
- Cerca de cables de alta tensión, carteles de neón o emisoras de radio cuyas frecuencias interfieran.
- Cerca de ferrocarriles, autopistas o aeropuertos.
- Dentro de trenes o automóviles.

Unidad de iluminación

En temperaturas bajas, llevara cierto tiempo hasta que el material fosforescente se ilumine, en algunos casos, la imagen toma un tono rojizo. Ello no significa que se haya averiado la unidad; la imagen se normalizara despues de unos momentos.

FUENTES DE ALIMENTACION OPCIONALES

CA de la línea – Vea la Figura 1 en la Guía General en la parte superior de esta pagina.
El uso del adaptador opcional (AD-K64/AD-K65) permite alimentar la unidad con CA de la línea.

Batería de automóvil (CC 12V) – Vea la Figura 2 en la Guía General en la parte superior de esta pagina.
El uso del adaptador para automóvil opcional (CA-K65) permite alimentar la unidad por medio de una batería de automóvil, a través del receptáculo para el encendedor de cigarrillos. ***Nunca mire la televisión mientras conduce un vehículo.***

under poor reception conditions, the tuning indicator may continue to move without stopping because the auto tuner cannot detect weak broadcasts. In this case, use a commercially available external antenna (model B only) or relocate the TV to a place where reception is better.

Locations where TV reception is bad

Far away from broadcasting stations, among ferro-concrete structures or near mountains.
Underground, in tunnels or in ferro-concrete buildings.
Near high-tension wires, neon signs, or radio stations whose frequencies interfere.
Near railroads, highways or airports.
In trains or cars.

Backlight

Low temperatures, it will take some time for the fluorescent material to illuminate, the light will take on a reddish tinge. This does not indicate malfunction of the backlight. Normal operation will resume after a short while.

OPTIONAL POWER SOURCES

household current – See Figure 1 in General Guide at the top of this page.
An optional AC adapter (AD-K64/AD-K65) allows the TV to be powered by standard household current.

car battery (DC12V) – See Figure 2 in General Guide at the top of this page.
An optional car adapter (CA-K65) allows the TV to be powered by a car battery through the vehicle's cigarette lighter. ***You should never, however, attempt to watch television while operating a motor vehicle.***

IMPORTANT!

- Never connect the car adapter to cigarette lighters for such vehicles as trucks or busses that use 24V DC electrical power.
- When an adapter is plugged into the DC IN 6V jack, the battery power source is automatically switched OFF.
- Adapters may become warm to the touch after extended periods of use. This is normal and is no cause for alarm.
- Always be sure to use the AD-K64/AD-K65 AC adapter (option) or CA-K65 car adapter (option) only. Using any other AC adapter or car adapter can cause damage to the TV not covered by the warranty.
- Be sure to switch power off before connecting or disconnecting the adapter.
- If you do not plan to use the TV for a long time, be sure to disconnect the AC adapter from the wall outlet or the car adapter from the cigarette lighter. Failure to do so may result in damage to the TV or it can run down your car's battery.

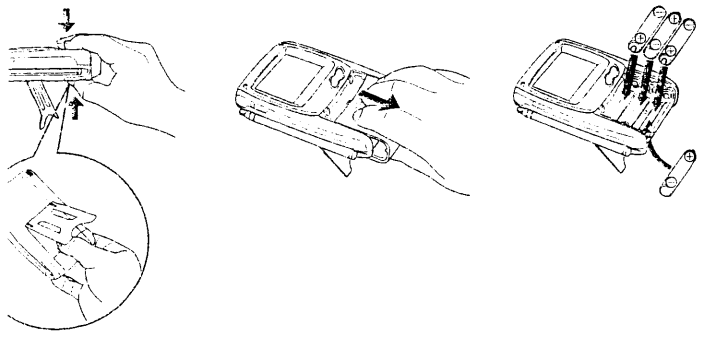
EXTERNAL ANTENNAS

outdoor antenna (Model B only) – See Figure 3 in General Guide at the top of this page.
If you are located in a remote area, among ferro-concrete structures or in a mountainous region, reception can be adversely affected. In this case, purchase an antenna adapter with a 3.5ø mini plug connector and connect it to your outdoor antenna. Insert the plug of the adapter into the EXT ANT jack of the TV.

car antenna (Model B only) – See Figure 4 in General Guide at the top of this page.
Reception may be unstable when the vehicle is in motion due to fluctuations in signal strength conditions. A commercially available car antenna with a 3.5ø mini plug connector can be used for better reception in motor vehicles. Consult the instruction manual for your antenna for details.

BATTERY INSTALLATION

Slide the Function Selector to the OFF position to turn off power.
Remove the battery compartment cover by sliding it in the direction of the arrow indicated in the figure.
Load 4 batteries ensuring that the poles (⊕/⊖) are facing in the proper directions.
Replace the battery compartment cover.



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Battery Type	Battery Life
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- Effective battery life may differ depending on brand.

VIDEO CONNECTIONS

The optional RF cord (model B only) or AUDIO/VIDEO cord (models C, D and N) lets you use the TV as a video cassette recorder monitor, etc. **See Figure 5 and 6 in General Guide at the top of this page.**

IMPORTANT!

- Be sure that the power of the TV and of the unit you are connecting it to is switched off.
- Use only hardware specifically recommended by CASIO when connecting to other equipment.

TROUBLESHOOTING

Whenever you experience problems, check the following points before assuming malfunction of the TV.

Picture	Sound	Items to check
No picture	No sound	1. Are batteries dead? 2. Are batteries loaded with their (+) and (–) ends oriented correctly? 3. Is the AC adapter or car adapter connected correctly? 4. Do batteries conform to specification? 5. Is something plugged into the Audio/Video input jack?
Picture visible	No sound	1. Is the volume setting too low? 2. Is the earphone plugged in? 3. Are batteries dead?
Picture completely white	Sound output	Is the brightness setting correct?
	No sound	Is something plugged into the Audio/Video input jack?
Dim colors or no color at all	Sound output	Is the rod antenna correctly adjusted?
Up or down picture movement, fuzzy or blurred picture, double image, etc.	Sound output	1. Is the rod antenna adjusted correctly? 2. Is a cable that does not conform with specifications plugged into the Audio/Video input jack? 3. Are there signals interfering from cars or electrical appliances? 4. Is the signal too weak or are there obstacles nearby?
Dark or blurred picture	Sound output	1. Is the brightness setting correct? 2. Are batteries dead?
Warm batteries		Are batteries dead? Dead batteries tend to become warm and should be replaced.

SPECIFICATIONS

Type:	LCD Color Television
Reception Frequencies:	UHF: UHF band CH 14 – CH 69 (model B) CH 21 – CH 69 (models C and N) CH 21 – CH 68 (model D) VHF: VHF band CH 2 – CH 13 (model B) CH 2 – CH 12 (models C and N)
Display Element:	High resolution color liquid crystal display (TI-STN Type)
Drive System:	Passive matrix system
Screen Size:	2.3 inches
Backlight:	High luminance fluorescent material
Antenna:	Rod antenna (VHF, UHF)
Speaker:	1 1/8 inches (28 mm) × 1
Connection Terminals:	External antenna jack (3.5ø mini) (Model B only) Earphone jack (3.5ø mini) External power source jack (DC IN 6V) Audio/Video input jack (3.5ø mini) (Models C, D and N)